Applicant : Frederick William Strahm et al. Attorney's Docket No.: 10559-Serial No.: 09/811,161 423001 / P10437 Filed : March 16, 2001

Filed : March 16, 2001 Page : 2 of 22

## Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

1. (currently amended) A method comprising:

## Listing of Claims:

the active connection.

at a device, opening a first connection to a server; establishing an information exchange protocol for communicating on the first connection: at a device, opening a second connection to the server; selecting, from connections including the second connection, at least one [[a]] connection to be an active connection and other connections as passive connections; [[ and]] communicating information [[ ]] via the active connection using [[the]]an information exchange protocol established for based on a type of the first active connection; and monitoring a predetermined set of parameters corresponding to one or more characteristics of the active and passive connections to determine whether to open one or more additional connections; close one or more of the opened connections; and change the selected active connection as a passive connection and select one or more of the passive connections as

Applicant : Frederick William Strahm et al. Attorney's Docket No.: 10559-Serial No.: 09/811,161 423001 / Pl0437 Filed : March 16, 2001 Page : 3 of 22

- 2. (original) The method of claim 1 further comprising communicating information configured for the information exchange protocol using the first connection as the active connection prior to selecting the second connection as the active connection.
- 3. (original) The method of claim 1 in which the second connection is opened prior to establishing the information exchange protocol.
- 4. (original) The method of claim 1 in which a single one of the connections is selected as the active connection.
- 5. (previously presented) The method of claim 1 in which two or more connections are selected as the active connection.
- 6. (original) The method of claim 1 in which the second connection includes a wireless connection.
- 7. (currently amended) A method comprising: at a device, opening a first connection to a server; establishing an information exchange protocol for communicating on the first connection based on a type of the first connection;
- at the device, opening a second connection to the server; selecting from <a href="mailto:the-opened">the-opened</a> connections including the second connection, <a href="mailto:one-or-one-one-opened

communicating information configured for [[the]] an information exchange protocol , that was established for the

Applicant : Frederick William Strahm et al. Attorney's Docket No.: 10559-Serial No.: 09/811,161 423001 / P10437 Filed : March 16, 2001

first connection, using corresponding to a type of the active connection: and

monitoring the <u>opened</u> connections for [[a]] one or more parameters selected from [[the]]a group consisting of transmittal rate, latency, and cost of transmittal; and

based on the monitored one or more parameters, determining whether to

	open one or more additional connections;
	open one of more additional connections,
	reselect[[ing]] the active connection to optimize the
monitored	one or more parameters; and
	close one or more additional connections.

- 8. (original) The method of claim 1 in which the information is communicated in packets that include aggregated information for more than one application.
- 9. (original) The method of claim 1, 4, or 6 in which the information includes a command that is effected by a module on the server.
- 10. (previously presented) The method of claim 8 in which the extent of aggregation for each application in the packets that include aggregated information for more than one application is dependent on an indicator of priority for information exchange associated with each application.

Applicant : Frederick William Strahm et al. Attorney's Docket No.: 10559-Serial No.: 09/811,161 423001 / P10437 Filed : March 16, 2001

Filed : March 16, 2001 Page : 5 of 22

11. (previously presented) A method comprising: at a device, opening a first connection to a server; establishing an information exchange protocol for communicating on the first connection based on a type of the first connection;

at the device, opening a second connection to the server; selecting, from the opened connections including the second connection, one or more [[a]] connections to be an active connection: [[ and ]]

communicating information configured for the information exchange protocol[[]], that was established for the first connection, using the active connection, the information comprising a command that causes the server to contact a remote system, receive a reply from the remote system, and effect a response without transmitting the reply to the device; and monitoring a predetermined set of parameters corresponding to one or more characteristics of the opened connections to determine whether to

open one or more additional connections;

close one or more of the opened connections; and
change the selected active connection as a passive
connection and select one or more of the passive connections as
the active connection.

## 12-18. (cancelled)

19. (currently amended) An apparatus comprising a processor and software configured to cause the processor to: open a first connection to a server; establish an information exchange protocol; Applicant : Frederick William Strahm et al. Attorney's Docket No.: 10559-Serial No.: 09/811,161 423001 / Pl0437 Filed : March 16, 2001 Page : 6 of 22

open a second connection to a server;

select from connections including the second connection,

one or more[[a]] connections to be an active connection;[[ and]]

communicate information via the active connection using the information exchange protocol [[ ]]established for the first connection; and

monitor a predetermined set of parameters corresponding to one or more characteristics of the opened connections to determine whether to

open one or more additional connections;

close one or more of the opened connections; and

change the selected active connection as a passive

connection and select one or more of the passive connections as
the active connection.

20. (original) The apparatus of claim 19 in which the processor is further configured to monitor the connections for a parameter selected from the group consisting of signal strength, transmittal rate, latency, cost of transmittal, and connection integrity; and

reselect the active connection to optimize the parameter.

- 21. (original) The apparatus of claim 19 in which the information is communicated in packets, each of at least some of the packets includes aggregated information for different local applications.
- 22. (original) The apparatus of claim 19 in which the information includes commands that are effected by a module on the server.

Applicant : Frederick William Strahm et al. Attorney's Docket No.: 10559-Serial No.: 09/811,161 423001 / P10437 Filed : March 16, 2001. Page : 7 of 22

23. (currently amended) An article comprising a machinereadable medium that stores machine-executable instructions, the instructions causing a machine to:

open a first connection to a server; establish an information exchange protocol;

open a second connection to a server;

select from the connections, <u>one or more</u>[[a]] connections to be an active connection; [[and]]

communicate information via the active connection using the information exchange protocol established for the first connection; and

monitor a predetermined set of parameters corresponding to one or more characteristics of the opened connections to determine whether to

open one or more additional connections;

close one or more of the opened connections; and

change the selected active connection as a passive

connection and select one or more of the passive connections as
the active connection.

- 24. (original) The article of claim 23 in which a single one of the connections is selected as the active connection.
- 25. (original) The article of claim 23 in which the instructions further cause the machine to monitor the connections for a parameter selected from the group consisting of signal strength, transmittal rate, latency, cost of transmittal, and connection integrity; and

reselect the active connection to optimize the parameter.

Applicant : Frederick William Strahm et al. Attorney's Docket No.: 10559-Serial No.: 09/811,161 423001 / Pl0437 Filed : March 16, 200%. Page : 8 of 22

26. (original) The article of claim 23 in which the information is communicated in packets, each of at least some of the packets includes aggregated information for different local applications.

- 27. (original) The article of claim 23 in which the information includes commands that are effected by a module on the server.
- 28. (currently amended) A system comprising: a device, a server, and communication links, in which the device is configured to:

open a first connection to the server using one of the communication links;

establish an information exchange protocol;

open a second connection to the server using another of the communication links;

select from the opened connections including the second connection, one or more[[a]] connections to be an active connection:

communicate information [[]] via the active connection using the information exchange protocol established for the first connection; and

monitor a predetermined set of parameters corresponding to one or more characteristics of the opened connections to determine whether to

open one or more additional connections;

close one cr more of the opened connections; and

change the selected active connection as a passive

Applicant : Frederick William Strahm et al. Attorney's Docket No.: 10559-423001 / P10437 Serial No.: 09/811,161 Filed : March 16, 2001

Page : 9 of 22

connection and select one or more of the passive connections as the active connection.

- 29. (original) The system of claim 28 in which at least one of the communication links includes a wireless communication link.
- 30. (previously presented) The system of claim 28 in which the device is further configured to monitor the connections for a parameter selected from the group consisting of signal strength, transmittal rate, latency, cost of transmittal, and connection integrity; and

reselect the active connection to optimize the parameter.

- 31. (previously presented) The system of claim 28 in which the device is further configured to select, from the connections, a connection to be a passive connection.
- 32. (previously presented) The system of claim 31 in which the passive connection is maintained while at least some of the information is communicated using the active connection.
  - 33. 37. (cancelled)
- 38. (previously presented) The method of claim 1 in which the device compares its geographic position to the range of one of the connections.

Applicant : Frederick William Strahm et al. Attorney's Docket No.: 10559-Serial No.: 09/811,161 423001 / P10437 Filed : March 16, 2001 Page : 10 of 22

- 39. (previously presented) The method of claim 1 in which the device retains outgoing information until reception is acknowledged.
- 40. (previously presented) The method of claim 39 in which the device monitors a buffer that retains outgoing information to determine whether to transmit additional outgoing information.
- 41. (previously presented) The method of claim 1 in which the device implements software-based application sockets to connect application input/output streams to the server.
- 42. (previously presented) The method of claim 7 in which the parameter comprises transmittal rate.
- 43. (previously presented) The method of claim 7 in which the parameter comprises latency.
- 44. (previously presented) The method of claim 7 in which the parameter comprises cost of transmittal.

Applicant : Frederick William Strahm et al. Attorney's Docket No.: 10559-Serial No.: 09/811,161 423001 / P10437 Filed : March 16, 2001. Page : 11 of 22

45. (currently amended) A method comprising: at a device, opening a first connection to a server; establishing an information exchange protocol for communicating on the first connection;

at a device, opening a second connection to the server; selecting, from connections including the second connection, one or more[[a]] connections to be an active connection and another connection to be a passive connection:[[and]]

communicating information using the active connection, wherein the same network, security, and compression protocols and parameters are used for information exchange as for the first connection, while maintaining the passive connection; and monitoring a predetermined set of parameters corresponding to one or more characteristics of the opened connections to determine whether to

open one or more additional connections;

close one or more of the opened connections; and
change the selected active connection as a passive
connection and select one or more of the passive connections as
the active connection.

- 46. (previously presented) The method of claim 45 in which the information is communicated in packets that include aggregated information for more than one application.
- 47. (previously presented) The method of claim 45 in which the information comprises a command for a module on the server; and the method comprises effecting the command by contacting a remote server, receiving a reply from the remote

Applicant : Frederick William Strahm et al. Attorney's Docket No.: 10559-Serial No.: 09/811,161 423001 / P10437

Filed : March 16, 2001 Page : 12 of 22

server and effecting a response without transmitting the reply to the device.

48. (previously presented) The method of claim 45 that comprises monitoring the connections for a parameter selected from the group consisting of signal strength, transmittal rate, latency, cost of transmittal, and connection integrity.